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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/832,252	04/10/2001	Jae-Hong Park	A34209	9470

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EXAMINER	
PHILLIPS, HASSAN A	

ART UNIT	PAPER NUMBER
2151	

DATE MAILED: 07/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/832,252	PARK ET AL.	
	Examiner	Art Unit	
	Hassan Phillips	2151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 August 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 April 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *7/02/01*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The Information Disclosure Statement (IDS) filed July 2, 2001, has been received and considered by the Examiner.

Claim Objections

1. A series of singular dependent claims is permissible in which a dependent claim refers to a preceding claim which, in turn, refers to another preceding claim.

A claim, which depends from a dependent claim, should not be separated by any claim that does not also depend from said dependent claim. It should be kept in mind that a dependent claim may refer to any preceding independent claim. In general, applicant's sequence will not be changed. See MPEP § 608.01(n).

If the Applicant intended for a dependent claim to depend on an independent claim instead (i.e. claim 14 dependent upon claim 13), the applicant should amend the claim appropriately.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

2. Claim 14 recites the limitation "the transport format combination indicator (TFCI)" in the last two lines. There is insufficient antecedent basis for this limitation in the claim. In order to advance prosecution of the application for patent, the Examiner has interpreted claim 14 to be dependent on claim 13. This would provide sufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-6, 8, 9, 11, 12, 16, are rejected under 35 U.S.C. 103(a) as being unpatentable over Decker, U.S. patent 5,946,320 in view of the Applicants Admitted Prior Art (AAPA).

3. In considering claims 1 and 16, Decker teaches a method for retransmitting data between two sides including a reception side and a transmission side in a mobile communication system including one or more mobile stations and one or more radio networks, the method comprising the steps of:

a) At the reception side, storing data received from the transmission side in a first storage unit, (col. 1, lines 65-67);

b) As a result of an error-checking procedure, if the data is erroneous, requesting the transmission side to retransmit the data, (col. 2, lines 1-5);

c) At the transmission side, retransmitting the requested data, (col. 2, lines 6-8);

d) At a combining unit at the reception side, combining the retransmitted data with the data stored in the first storage unit, (col. 2, lines 31-43);

e) If the combined data is not erroneous, clearing the data and the retransmitted data from the first storage unit and transmitting the combined data to a first upper layer included in the reception side, (col. 2, lines 9-11); and

f) In response to an ACK signal from the reception side representing that normal data has been received, clearing at the transmission side the retransmitted data from a second storage unit, (col. 2, lines 6-11).

Although the method taught by Decker shows substantial features of the claimed invention, it fails to expressly disclose:

g) Transmitting information related to the retransmission.

Nevertheless, it would have been obvious to one of ordinary skill in the art that information related to the retransmission must be transmitted to the reception side in order for the reception side to determine whether the data being retransmitted is retransmitted data or not. This was indicated by the Applicant in the disclosure, on page 2, paragraph 8.

Thus given the AAPA, it would have been apparent to one of ordinary skill in the art at the time of the present invention to modify the teachings of Decker to show transmitting to the reception side first information related to the retransmission. This would have allowed the reception side to determine whether received data was retransmitted data or not.

4. In considering claim 2, Decker teaches the first storage unit included in a first physical layer included in the reception side. See col. 4, lines 9-12.

5. In considering claim 3, it is implicit in the method taught by Decker that the second storage unit is included in a second upper layer included in the transmission side. See col. 1, lines 59-62.

6. In considering claim 4, Decker further teaches:
   a) Performing the error-checking procedure by a cyclic redundancy check unit, (col. 2, lines 46-49);
   b) If the data is erroneous, failing to transmit the data stored in the first storage unit to the first upper layer included in the reception side, and by the first upper layer, requesting the transmission side to retransmit the data by transmitting a NACK signal representing that desired data has not been received, (col. 2, lines 1-5).

7. In considering claim 5, the teachings of Decker provide a means for the NACK signal to be generated at the first upper layer when the desired data has not been received during a predetermined time. See col. 2, lines 1-5.

8. In considering claim 6, Decker teaches the NACK signal being generated at the first upper layer when other data, expected to be received after the desired data is received at the upper layer before the desired data. See col. 2, lines 1-5.

9. In considering claim 8, the AAPA teaches the transmission side transmitting the first information to the reception side before retransmitting the requested data. See page 2, paragraph 8. One of ordinary skill in the art would combine the teachings of Decker with the AAPA for the same reasons indicated in consideration of claim 1.

10. In considering claim 9, the AAPA teaches the first information transmitted as a first upper layer message. See page 2, paragraph 8. One of ordinary skill in the art would combine the teachings of Decker with the AAPA for the same reasons indicated in consideration of claim 1.

11. In considering claim 11, Decker teaches clearing the data from the first storage unit and transmitting the data to the first upper layer, and generating the ACK signal in the first upper layer in response to reception of the data by the first upper layer, if the data is not erroneous. See col. 2, lines 6-11.

12. In considering claim 12, see col. 2, lines 31-43.

13. Claims 7, 10, are rejected under 35 U.S.C. 103(a) as being unpatentable over Decker, in view of the AAPA, and further in view of Davies et al. (hereinafter Davies), U.S. patent 6,646,993.

14. In considering claim 7, although the method taught by Decker in view of the AAPA shows substantial features of the claimed invention, it fails to expressly disclose:

a) The information including when the data will be retransmitted, and a way of processing the data at the transmission side before retransmitting the data.

Nevertheless, including information such as: when data will be transmitted and how the data is processed at the transmission side before the data is sent to the reception side, was well known in the art at the time of the present invention. This is demonstrated by Davies in a similar field of endeavor that teaches a communication apparatus and method for format adaptation comprising:

a) Receiving first information that is used to perform appropriate decoding of data, such as how the transmission side established a coding rate and a puncturing, (col. 2, lines 26-35).

Thus, given the teachings of Davies, it would have been obvious to one of ordinary skill in the art at the time of the present invention to modify the teachings of

Decker and the AAPA to show the first information including information about when the transmission side will retransmit the requested data to the reception side and information about a way of processing the requested data at the transmission side before retransmitting the requested data to the reception side, the way including how to establish a data coding rate and a puncturing. Although this would have complicated the receiver, and increased storage requirements, this would have allowed the reception side to better determine whether received data was retransmitted data or not, and how to appropriately handle the retransmitted data, Davies, (col. 2, lines 39-55).

15. In considering claim 10, Decker teaches processing the requested data at the transmission side before retransmitting the requested data to the reception side being different from the way of processing the data at the transmission side before transmitting the data to the reception side. See col. 2, lines 31-43.

16. Claims 13-15, 17, are rejected under 35 U.S.C. 103(a) as being unpatentable over Decker in view of the Davies.

17. In considering claims 13 and 17, Decker teaches a method for retransmitting data between two sides including a reception side and a transmission side in a mobile communication system including one or more mobile stations and one or more radio networks, the method comprising the steps of:

a) At the reception side, storing data received from the transmission side in a first storage unit, (col. 1, lines 65-67);

b) As a result of an error-checking procedure, if the data is erroneous, requesting the transmission side to retransmit the data, (col. 2, lines 1-5);

c) At the transmission side, retransmitting to the reception the requested data, (col. 2, lines 6-8);

d) At a combining unit at the reception side, combining the retransmitted data with the data stored in the first storage unit, (col. 2, lines 31-43);

e) If the combined data are not erroneous, clearing the data and the retransmitted data from the first storage unit and transmitting the combined data to a first upper layer included in the reception side, (col. 2, lines 9-11); and

f) In response to an ACK signal from the reception side representing that normal data has been received, clearing at the transmission side the retransmitted data from a second storage unit, (col. 2, lines 6-11).

Although the method taught by Decker shows substantial features of the claimed invention, it fails to expressly disclose:

g) Retransmitting a transport format combination indicator (TFCI).

Nevertheless, transmitting TFCI's was well known in the art at the time of the present invention. This is demonstrated by Davies in a similar field of endeavor that teaches a communication apparatus and method for format adaptation comprising:

g) Receiving a transmitted TFCI, (col. 2, lines 26-35).

Thus, given the teachings of Davies, it would have been obvious to one of ordinary skill in the art at the time of the present invention to modify the teachings of Decker and the AAPA to show retransmitting to the reception side data and a TFCI. Although this would have complicated the receiver, and increased storage requirements, this would have allowed the reception side to better determine whether received data was retransmitted data or not, and how to appropriately handle the retransmitted data, Davies, (col. 2, lines 39-55).

18. In considering claim 14, Davies teaches the reception side interpreting the TFCI. See col. 2, lines 31-32. One of ordinary skill in the art would combine the teachings of Decker with the Davies for the same reasons indicated in consideration of claim 13.

19. In considering claim 15, the teachings of Decker provide a means for combining the retransmitted data with the data in the first storage unit if it is determined that the reception side is receiving the retransmitted data by interpreting the TFCI. See col. 2, lines 31-43.

Conclusion

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Decker, U.S. patent 5,946,320, discloses a method for transmitting packets in an air interface based on a hybrid ARQ type II.

Davies et al., U.S. patent 6,646,993, discloses a well-known method of using transport format combination indicators (TFCI) in transmitted signals.

Rittle, U.S. patent 6,173,431, discloses a method and apparatus for transmitting and receiving information packets using multi-layer error detection.

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hassan Phillips whose telephone number is (703) 305-8760. The examiner can normally be reached on M-F 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (703) 305-4792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

FRANTZ B. JEAN
PRIMARY EXAMINER